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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,101	03/12/2004	Lothar Benedict Erhard Josef Moeller	Moeller 20-10	7666

46363 7590 09/19/2007

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EXAMINER	
LIU, LI	

ART UNIT	PAPER NUMBER
2613	

MAIL DATE	DELIVERY MODE
09/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/799,101	Applicant(s) MOELLER ET AL.	
	Examiner Li Liu	Art Unit 2613	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 06 September 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☐ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: 1-9.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER

Continuation of 11.

1. Applicant's arguments filed on Sept 06 2007 are not persuasive, and do not place the application in condition for allowance.

The applicant argues "the motivation for such a combination is not founded on either Zheng, Hayee or conventional teaching, but rather, on impermissible hindsight based on Applicants' teaching. Furthermore, the combination of Zheng and Hayee's RZ modulation is contrary to the intended purpose of Zheng". ... . And "[t]he fact that Lyubomirsky, an expert in this technical field, conducted a similar study only after Applicants' work on this subject, is yet another indication of the non-obviousness of Applicants' Claimed invention". "In summary, Applicants submit that the claimed invention is not obvious over the cited references. Furthermore, since Zheng and Hayee teach away from the use of RZ modulation in combination with Zheng's method (which seeks to optimize sensitivity without degrading dispersion), the alleged motivation to combine Zheng, Hayee and Lee is merely hindsight based on Applicants' specification."

2. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See In re McLaughlin, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

3. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

4. In this case, applicant claims a receiver for receiving RZ-duobinary signal at bit rate B bits/s, the receiver comprises a bandpass filter with a passband of ~B Hz and an optical detector.

Zheng teaches a receiver for receiving NRZ-duobinary signal at bit rate B bits/s, the receiver comprises a bandpass filter with a passband of ~B Hz and an optical detector.

Zheng et al discloses that by optimizing the optical filter and the electrical filter in the receiver, the sensitivity of the optical duobinary signal can be improved greatly; meanwhile, the high dispersion tolerance nature of the optical duobinary signal will not be degraded. Zheng et al investigates the 40 Gb/s NRZ duobinary signal, and admits that the dispersion tolerance is the most important factor for the 40 Gb/s optical duobinary signal.

However, as disclosed by Hayee et al, for 10 Gb/s and 20 Gb/s system (note: the applicant presents a 10 Gb/s system), the nonlinearity dominates; then, a RZ signal is preferred and operates better (Hayee: ABSTRACT).

Therefore, for a 10 Gb/s system, a RZ duobinary signal should be used. But, the RZ duobinay signal is more affected by dispersion.

Since Zheng et al teaches a method to optimize the optical filter at the receiver side to improve the dispersion tolerance for NRZ signal, and a narrow optical filter can improve sensitivity effectively, it is obvious that an optimized optical filter can be used in the receiver so to improve the dispersion tolerance for 10 Gb/s RZ signal. That is, the combination of Zheng et al and Hayee et al will make the 10 Gb/s RZ-duobinary system tolerate both the nonlinearity and the dispersion. For 10 Gb/s system, Zheng and Hayee do not teach away from combining Zheng with Hayee's RZ modulation.

Also, another expert in the same filed conducted a similar study on the same subject is not necessarily and patentably an indication of non-obviousness of the claimed invention.

5. Regarding applicant another arguments "Hayee, which teaches on p.991 (right column), that the bandpass filter for RZ format is 4R, where R is the bit rate. Such teaching of the bandwidth for RZ being several times that of the bit rate is indeed typical of conventional teaching", the applicant does not point out the bandwidth of the electrical filter used. Hayee et al clearly states that this optical bandwidth is based on a narrow electrical filter of 0.8R. As shown in Zheng et al' Figure 2, a narrow electrical filter needs a wide optical filter for a specific sensitivity.